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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,899

02/09/2004

Craig Smith

14374.105

8764

22913

7590

12/06/2005

WORKMAN NYDEGGER
(F/K/A WORKMAN NYDEGGER & SEELEY)
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EXAMINER

HO, ALLEN C


ART UNIT

PAPER NUMBER

2882

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/774,899	Applicant(s) SMITH ET AL.	
	Examiner Allen C. Ho	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-29 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-17 and 30-36 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Fig. 7B is objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "72" and "74" have both been used to designate the chamfer portion of the clamp portion. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

- (1) Paragraph [066], line 11, "12A" should be replaced by --12--;
- (2) Paragraph [066], line 12, "12" should be replaced by --11--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

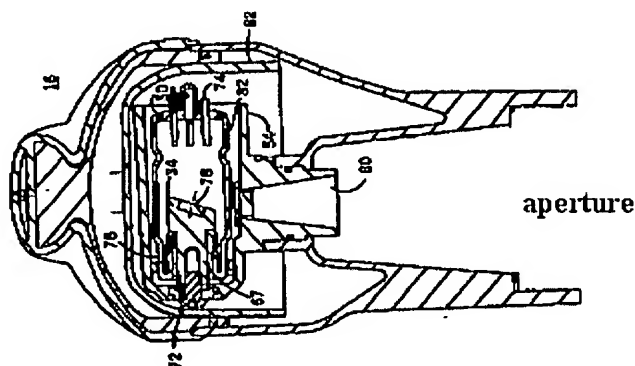
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Kantor *et al.*

(U. S. Patent No. 6,644,853 B1).



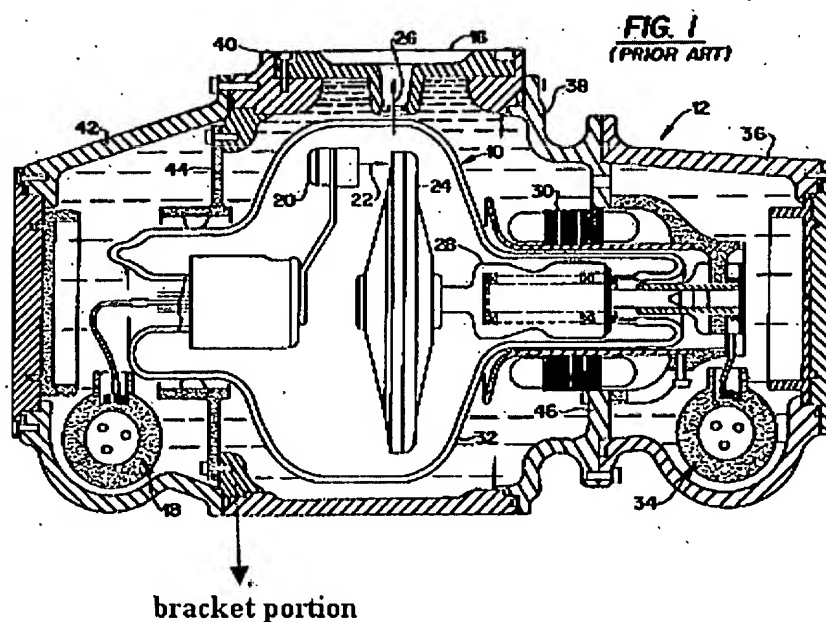
With regard to claim 1, Kantor *et al.* disclosed an x-ray tube comprising: an evacuated enclosure (32) containing an electron source (36) and an anode (34) positioned to receive electrons produced by the electron source; an outer housing (16) containing the evacuated enclosure; and a mounting portion comprising: a first mounting portion (20) that mechanically attaches to an outer surface of the outer housing, and a second mounting portion (54) that mechanically attaches to a portion of the evacuated enclosure, the second mounting portion also

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being mechanically attached to the first mounting portion through an aperture (through which the first mounting portion is inserted into the outer housing) defined in the outer housing (see Figure).

With regard to claim 7, Kantor *et al.* disclosed an x-ray tube as defined in claim 1, wherein the mounting assembly is further configured to mechanically attach the x-ray tube to a portion of an x-ray generating device (10).

5. Claims 8, 9, 12-17, and 30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Jedlitschka *et al.* (U. S. Patent No. 5,303,283).



With regard to claim 8, Jedlitschka *et al.* disclosed a mounting assembly comprising: a bracket portion (see figure); and a clamp portion (44) mechanically attached to the bracket portion. Note: the x-ray tube has not been given patentable weight because it is construed as an intended use for the mounting assembly.

With regard to claim 9, Jedlitschka *et al.* disclosed a mounting assembly as defined in claim 8. Since claim 9 fails to set forth additional structural limitation on the mounting assembly, it is rejected with claim 8.

With regard to claim 12, Jedlitschka *et al.* disclosed a mounting assembly as defined in claim 8, wherein the bracket portion has at least one surface that is shaped to physically engage a corresponding portion of the outer housing.

With regard to claim 13, Jedlitschka *et al.* disclosed a mounting assembly as defined in claim 12, wherein at least one surface of the bracket portion is a concave surface.

With regard to claim 14, Jedlitschka *et al.* disclosed a mounting assembly as defined in claim 8, wherein the anode of the x-ray tube is a rotary anode.

With regard to claim 15, Jedlitschka *et al.* disclosed a mounting assembly as defined in claim 8, wherein the bracket portion further comprises a circular recess (aperture) in which the clamp portion is at least partially received when the clamp portion is mechanically attached to the bracket portion, the circular recess being concentric with the aperture of the bracket portion (Fig. 1).

With regard to claim 16, Jedlitschka *et al.* disclosed a method of joining an evacuated enclosure to a structure, the evacuated enclosure including a window assembly, the method comprising: attaching a clamp portion (44) of a mounting assembly to a bracket portion of the mounting assembly such that an aperture defined in the clamp portion is aligned with an aperture defined in the bracket portion (Fig. 1); attaching the clamp portion of the mounting assembly to an extended segment of the window assembly (32) of the evacuated enclosure (10) such that a window located in the window assembly is aligned with the apertures of the clamp portion and

the bracket portion; and attaching the bracket portion of the mounting assembly to a surface of the structure (12).

With regard to 17, Jedlitschka *et al.* disclosed a method as defined in claim 16, wherein attaching the clamp portion of the mounting assembly to an extended segment further includes tightening the clamp portion about the extended segment such that the clamp portion frictionally engages the window assembly (column 1, lines 66-68).

With regard to claims 30, 31, and 33, Jedlitschka *et al.* disclosed an x-ray generating device comprising a device body (12); an x-ray tube including: an evacuated enclosure (32) containing an electron source (20) and a rotary anode (24); and a mounting assembly including: a bracket portion that mechanically attaches to a portion of the device body, and a clamp portion (44) that frictionally engages (column 1, lines 66-68) a portion of the evacuated enclosure proximate an x-ray transmissive window (32) that is located on a surface of the evacuated enclosure, wherein the clamp portion is also mechanically attached to the bracket portion such that the mounting assembly supports the evacuated enclosure in a specified position with respect to the body.

With regard to claim 32, Jedlitschka *et al.* disclosed an x-ray generating device as defined in claim 31, wherein the portion of the device body to which the bracket portion mechanically attaches is a gantry (CT gantry) of the medical imaging device (a CT, column 1, lines 9-15).

With regard to claim 34, Jedlitschka *et al.* disclosed an x-ray generating device as defined in claim 30, wherein the x-ray tube further comprises an outer housing (12) containing the evacuated enclosure, and wherein the bracket portion of the mounting assembly also attaches to a portion of the outer housing.

With regard to claim 35, Jedlitschka *et al.* disclosed an x-ray generating device as defined in claim 30. Claim 35 recites intended use. Accordingly, it is rejected with claim 30.

With regard to claim 36, Jedlitschka *et al.* disclosed a mounting assembly comprising: a bracket portion including an aperture; a clamp portion (44) that attaches to the bracket portion such that an aperture in the clamp portion is aligned with the aperture of the bracket portion (see figure). Note: Claim 36 recites a mounting assembly for use in attaching an evacuated enclosure of an x-ray tube to a device. Therefore, the x-ray tube has not been given patentable weight.

6. Claims 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Okada (U. S. Patent No. 5,492,780).

With regard to claims 8, Okada disclosed a mounting assembly comprising: a bracket portion (11); and a clamp portion (20A-1) mechanically attached to the bracket portion.

With regard to claim 9, Okada disclosed a mounting assembly as defined in claim 8. Claim 9 is rejected with claim 8 since it fails to set forth additional structural limitation on the mounting assembly.

With regard to claim 10, Okada disclosed a mounting assembly as defined in claim 9, wherein the clamp portion comprises an annular ring (20A-1) having a radial cut defined there through.

With regard to claim 11, Okada disclosed a mounting assembly as defined in claim 10, wherein the bracket portion further comprises an aperture that aligns with the aperture of the clamp portion when the bracket portion and the clamp portion are mechanically attached (Fig. 1).

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With regard to claim 12, Okada disclosed a mounting assembly as defined in claim 8. Claim 12 is rejected with claim 8 since it fails to set forth additional structural limitation on the mounting assembly.

With regard to claim 13, Okada disclosed a mounting assembly as defined in claim 12, wherein the at least one surface of the bracket portion is a concave surface (**20B-1**).

With regard to claim 14, Okada disclosed a mounting assembly as defined in claim 8. Claim 12 is rejected with claim 8 since it fails to set forth additional structural limitation on the mounting assembly.

With regard to claim 15, Okada disclosed a mounting assembly as defined in claim 8, wherein the bracket portion further comprises a circular recess (**11a**) in which the clamp portion is at least partially received when the clamp portion is mechanically attached to the bracket portion, the circular recess being concentric with the aperture of the bracket portion.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kantor *et al.* (U. S. Patent No. 6,644,853 B1) as applied to claim 1 above.

With regard to claim 2, Kantor *et al.* disclosed an x-ray tube as defined in claim 1, wherein the first mounting portion comprises a bracket. However, Kantor *et al.* failed to teach that the bracket is attached to the second mounting portion using a plurality of screws.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to attach the bracket to the second mounting portion using a plurality of screws, since a person would be motivated to mount the bracket to the second mounting portion using any well known attachment means.

With regard to claim 3, Kantor *et al.* disclosed an x-ray tube as defined in claim 2. However, although Kantor *et al.* disclosed that aluminum is a preferred material for the sake of minimizing the weight of the x-ray tube head (column 3, lines 49-51), Kantor *et al.* failed to teach that the bracket is substantially composed of aluminum.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a bracket composed of aluminum, since a person would be motivated to use a material that would reduce the weight of the x-ray tube head.

Allowable Subject Matter

9. Claims 4-6, 10, 11, and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The indicated allowability of claims 16-20 is withdrawn in view of the newly discovered reference(s) to Jedlitschka *et al.* (U. S. Patent No. 5,303,283).

11. Claims 21-29 are allowed.

12. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 21-29, although the prior art discloses an x-ray tube comprising an evacuated enclosure containing an electron source and a rotary anode, a window assembly attached to an aperture formed in the evacuated enclosure comprising an x-ray transmissive window, it fails to teach or fairly suggest a mounting assembly comprising a clamp portion including an annular ring having a radial cut through one portion thereof, and a bracket portion having a substantially planar first surface, a curved second surface, and a aperture extending between the first and the second surfaces as claimed.

Response to Arguments

13. Applicant's arguments filed 28 September 2005 with respect to the drawings have been fully considered and are persuasive. The objection of the drawings has been withdrawn.

14. Applicant's arguments filed 28 September 2005 with respect to the specification have been fully considered and are persuasive. The objections of the specification have been withdrawn.

15. Applicant's arguments filed 28 September 2005 with respect to claims 1-15 have been fully considered and are persuasive. The rejection of claims 1-15 under 35 U.S.C. 112, second paragraph, has been withdrawn.

16. Applicant's arguments filed 28 September 2005 have been fully considered but they are not persuasive.

With regard to claims 1-7, the applicants argue that Kantor *et al.* failed to teach that the second mounting portion (54) being mechanically attached to the first mounting portion (20)

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through an aperture defined in the outer housing (16). The examiner respectfully disagrees. As shown in Fig. 1, the second mounting portion (54) is mechanically attached to the first mounting portion (20) by means of structure between the second mounting portion and the first mounting portion. Furthermore, the second mounting portion (54) is mechanically attached to the first mounting portion (20) through an aperture (through which the first mounting portion is inserted into the outer housing) defined in the outer housing. Therefore, the rejections are being maintained.

With regard to claims 8-15, the applicants argue that Jedlitschka *et al.* failed to teach a mounting assembly that includes a clamp portion that frictionally engages a portion of the evacuated enclosure proximate an x-ray transmissive window that is located on a surface of the evacuated enclosure. The examiner respectfully disagrees. Since claim 8 does not actually claim an x-ray tube in the body of the claim, none of the structure of the x-ray tube has been given patentable weight. The language "In an x-ray tube, a mounting assembly for use ..." is evidence that the applicants do not intend to claim an x-ray tube. The only structure claimed by claim 8 is a mounting assembly that comprises a bracket portion and a clamp portion, wherein the clamp portion is mechanically attached to the bracket portion. Since Jedlitschka *et al.* clearly disclosed such a mounting assembly, the rejections are being maintained.

With regard to claims 30-35, the applicants argue that Jedlitschka *et al.* failed to disclose a clamp portion that frictionally engages a portion of the evacuated enclosure proximate an x-ray transmissive window that is located on a surface of the evacuated enclosure. The examiner respectfully disagrees. First, there exists a frictional force between the clamp portion (44) and the evacuated enclosure (22) because the evacuated enclosure is kept in position by the clamp

portion (column 1, lines 66-68). Second, the entire evacuated enclosure is an x-ray transmissive window. Thus, Jedlitschka *et al.* disclosed a clamp portion that frictionally engages a portion of the evacuated enclosure proximate an x-ray transmissive window that is located on a surface of the evacuated enclosure. Therefore, the rejections are being maintained.

With regard to claim 36, the applicants argue that Jedlitschka *et al.* failed to disclose a clamp portion that Jedlitschka *et al.* failed to disclose a clamp portion that attaches to a portion of an x-ray transmissive window assembly of the evacuated enclosure. The examiner respectfully disagrees. The recitation "A mounting assembly for use ..." has been construed as intended use. Therefore, the x-ray tube and its structure have not been given patentable weight. The only structure being claimed is the mounting assembly. As shown in Fig. 1, Jedlitschka *et al.* disclosed a clamp portion (44) that attaches to the bracket portion such that an aperture in the clamp portion is aligned with the aperture of the bracket portion. Therefore, the rejection is being maintained.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Williams (U. S. Patent No. 4,260,891) disclosed a mounting assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho
Primary Examiner
Art Unit 2882

01 December 2005